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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/626,627	07/25/2003	Calvin F. Quate	003848.00129	9615
7055	7590	04/13/2006	EXAMINER	
GREENBLUM & BERNSTEIN, P.L.C.			FORMAN, BETTY J	
1950 ROLAND CLARKE PLACE			ART UNIT	
RESTON, VA 20191			PAPER NUMBER	

1634

DATE MAILED: 04/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/626,627	<b>Applicant(s)</b> QUATE ET AL.	
	<b>Examiner</b> BJ Forman	<b>Art Unit</b> 1634	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 01 February 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 113-123, 126-128, 130, 132, 134, 135 and 143 is/are pending in the application.
- 4a) Of the above claim(s) 113-122 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 123, 126-128, 130, 132, 134, 135 and 143 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **FINAL ACTION**

### ***Status of the Claims***

1. This action is in response to papers filed 1 February 2006 in which the specification was amended, claims 123, 127 and 135 were amended, claims 124-125, 129, 131, 133 and 136-142 were canceled and claim 143 was added. All of the amendments have been thoroughly reviewed and entered.

The previous rejections in the Office Action dated 1 August 2005 under obviousness-type double patenting are maintained. The previous rejections under 35 U.S.C. 112, first paragraph are withdrawn in view of the amendments and/or citations provided on page 10 of the response. Applicant's arguments have been thoroughly reviewed and are discussed below.

New grounds for rejection, necessitated by the amendments and IDS, are discussed.

Claims 113-122 are withdrawn.

Claims 123, 126-128, 130, 132, 134-135 and 143 are under prosecution.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 130, 134 and 135 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 130, 134 and 135 are each indefinite for the recitation "said one or more wavelengths of light" because the recitation lacks proper antecedent basis in Claim 123, which is drawn to "one spatially separated wavelength of light".

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 123, 126-128, 130, 132, 134-135 and 143 are rejected under 35 U.S.C. 102(e) as being anticipated by Gao et al (U.S. Patent Application Publication No. 2004/0023368, having priority to 11 February 1998).

Regarding Claim 123, Gao et al disclose an apparatus comprising a light source (#802) positioned to direct a light output wherein the light is redirected by a micromirror array (#801) under the control of a computer (#814) to produce the light output, a filter (#803) placed in the path of the light redirected by the light source and passes a spatially separated wavelength of light (¶ 81-89 and Fig. 8A-C).

Regarding Claim 126, Gao et al disclose the apparatus wherein the light is UV, visible or infrared (¶ 82, line 4-8).

Regarding Claim 127, Gao et al disclose the apparatus comprising lens (# 804 & 806) between the light source and a target (Fig. 8A).

Regarding Claim 128, Gao et al disclose the apparatus wherein the micromirror array is a two-dimensional micromirror array (¶ 84-85).

Art Unit: 1634

Regarding Claim 130, Gao et al disclose the apparatus wherein the light catalyzes are reaction (e.g. photo-chemical reactions ¶ 82).

Regarding Claim 132, Gao et al disclose the apparatus wherein the light is a combination of UV, visible or infrared (¶ 82).

Regarding Claim 134, Gao et al disclose the apparatus wherein light catalyzes activation of nucleotide bases at the target (Fig. 2-3).

Regarding Claim 135, Gao et al disclose the apparatus wherein light catalyzes activation of amino acids at the target (Fig. 4-5).

Claims 130, 134 and 135 are drawn to intended uses for the apparatus of Claim 123. While Gao et al teaches the recited uses, the recitation of intended use does not further define the structure of the apparatus.

The courts have stated that a claim containing a “recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus” if the prior art apparatus teaches all the structural limitations of the claim. *Ex parte Masham*, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987).

Regarding Claim 143, Gao et al disclose the apparatus wherein the filter is a bandpass filter (i.e. the filter removes unwanted wavelengths and allows desired to pass ¶ 83).

6. Claims 123, 126-128, 130, 132, 134-135 and 143 are rejected under 35 U.S.C. 102(e) as being anticipated by Gulari (U.S. Patent Application Publication No. 2004/0035690, having priority to 11 February 1998).

Regarding Claim 123, Gulari discloses an apparatus comprising a light source (#802) positioned to direct a light output wherein the light is redirected by a micromirror array (#801) under the control of a computer (#814) to produce the light output, a filter (#803) placed in the

Art Unit: 1634

path of the light redirected by the light source and passes a spatially separated wavelength of light (§ 140-148 and Fig. 8A-C).

Regarding Claim 126, Gulari discloses the apparatus wherein the light is UV, visible or infrared (§ 141, line 4-8).

Regarding Claim 127, Gulari discloses the apparatus comprising lens (# 804 & 806) between the light source and a target (Fig. 8A).

Regarding Claim 128, Gulari discloses the apparatus wherein the micromirror array is a two-dimensional micromirror array (§ 143).

Regarding Claim 130, Gulari discloses the apparatus wherein the light catalyzes are reaction (e.g. photo-chemical reactions § 141).

Regarding Claim 132, Gulari discloses the apparatus wherein the light is a combination of UV, visible or infrared (§ 141).

Regarding Claim 134, Gulari discloses the apparatus wherein light catalyzes activation of nucleotide bases at the target (Fig. 2-3).

Regarding Claim 135, Gulari discloses the apparatus wherein light catalyzes activation of amino acids at the target (Fig. 4-5).

Claims 130, 134 and 135 are drawn to intended uses for the apparatus of Claim 123. While Gulari discloses the recited uses, the recitation of intended use does not further define the structure of the apparatus.

Regarding Claim 143, Gulari discloses the apparatus wherein the filter is a bandpass filter (i.e. the filter removes unwanted wavelengths and allows desired to pass (§ 142).

### ***Double Patenting***

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29

Art Unit: 1634

USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. Claims 123, 126-128, 130, 132, 134-135 and 143 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-13 of U.S. Patent No. 6,480,324 in view of Cerrina et al (U.S. Patent No. 6,375,903. Although the conflicting claims are not identical, they are not patentably distinct from each other because both claim sets are drawn to an apparatus for photolithography. The claims sets differ in that the instant claims more narrowly define the light source and spatial light modulator of the patent claims. However, Cerrina et al teach a similar apparatus wherein the preferred components include the instantly claimed light sources and a filter for variable spectrum (Column 7, line 19-Column 8, line 19). Therefore, it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to apply the preferred light sources and filters of Cerrina et al to the '324 apparatus based on the preferred teaching of Cerrina (Column 7, line 19-Column 8, line 19).

#### **Response to Comments**

9. Applicant states that once the instant claims are in condition for allowance, a Terminal Disclaimer will be considered. Applicant has not presented any arguments to traverse the above rejection. The rejection is therefore maintained and made FINAL.

10. Claims 123, 126-128, 130, 132, 134-135 and 143 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over

Art Unit: 1634

claims 71-73, 75-85, 87-94, 113-139, 170-194 of copending Application No. 10/223,719 in view of Cerrina et al (U.S. Patent No. 6,375,903. Although the conflicting claims are not identical, they are not patentably distinct from each other because both sets of claims are drawn to an apparatus comprising computer controlled light source and filter. The claim sets differ in that the instant claims more narrowly define the light source and filter. However, Cerrina et al teach a similar apparatus wherein the preferred components include the instantly claimed light sources and filter for variable spectrum (Column 7, line 19-Column 8, line 19). Therefore, it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to apply the preferred light sources and filters of Cerrina et al to the '719 apparatus based on the preferred teaching of Cerrina (Column 7, line 19-Column 8, line 19).

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

#### **Response to Comments**

11. Applicant asserts that because the '719 application is not a patent, the instant application can be sent to issue. Applicant has not presented any arguments to traverse the above rejection. The rejection is therefore maintained and made FINAL.

12. Applicant's submission of an information disclosure statement under 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p) on 1 February 2006 prompted the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 609.04(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO



Art Unit: 1634

MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

### **Conclusion**

13. No claim is allowed.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BJ Forman whose telephone number is (571) 272-0741. The examiner can normally be reached on 6:00 TO 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ram Shukla can be reached on (571) 272-0735. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to (571) 272-0547.

Patent applicants with problems or questions regarding electronic images that can be viewed in the Patent Application Information Retrieval system (PAIR) can now contact the USPTO's Patent Electronic Business Center (Patent EBC) for assistance. Representatives are available to answer your questions daily from 6 am to midnight (EST). The toll free number is (866) 217-9197. When calling please have your application serial or patent number, the type of document you are having an image problem with, the number of pages and the specific nature of the problem. The Patent Electronic Business Center will notify applicants of the resolution of the problem within 5-7 business days. Applicants can also check PAIR to confirm that the problem has been corrected. The USPTO's Patent Electronic Business Center is a complete service center supporting all patent business on the Internet. The USPTO's PAIR system

Art Unit: 1634

provides Internet-based access to patent application status and history information. It also enables applicants to view the scanned images of their own application file folder(s) as well as general patent information available to the public.

For all other customer support, please call the USPTO Call Center (UCC) at 800-786-9199.



BJ Forman, Ph.D.  
Primary Examiner  
Art Unit: 1634  
April 11, 2006